Vol. 1 APRIL 10 CENTS No. 2

XTAL

devoted entirely to

the VE amateur

1935

XTAL

PUBLISHED MONTHLY
BY
ONTARIO AMATEURS
UNDER
DIRECTION OF THE S.C.M.
AT
4 SHORNCLIFFE AVE.
TORONTO, ONTARIO

VOL. 1
APRIL

No. 2
1935

EXPRESSIONS HEREIN ARE THE OPINIONS OF CONTRIBUTORS ONLY

XTAL

Turn backward, turn backward, oh time in thy flight,
To the dear days of old when, by dim candlelight,
We patiently fussed with a thin strand of wire
And a piece of galena—our eyes filled with fire.
Our first thrill with crystals—Alas and Alack!
Running WLW couldn't now bring it back.

As progress moved onward and "tubes" we all used,
Transmitters (so many!) the air lanes abused,
We needed a ruler to keep us in place,
Or banished we'd be like corsets and lace.
So they gave us crystal exciters and now
Each amateur knows his own wavelength. (And how!)

The crystal idea has spread to all parts
Of ham equipment including our hearts!
For amateurs find it forever renewed—
Crystals in gold bands for fair damsels wooed.
But on! Let us mention some uses of late:
Speakers, mikes, pickups, and filters-to-date.

And now a new "XTAL" seems destined to be
Essential to hamdom in our Canady.
So let's get behind it—assure it's success!
By the Beard of the Prophet—the answer is "yes!"
I am not an infant, but I hope to see
The issue that's dated 2003!

—VE3ZA

CHANGES IN NEW REGULATIONS

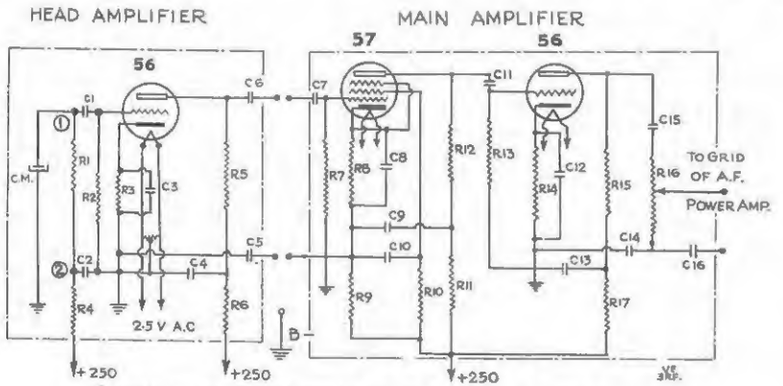
1715 to 1775 KC is open to CW only commencing April 1st. This 60 KC should prove very helpful to CW men, and its use is advocated for several reasons: QRM is practically nil, there is no skip to speak of, better signals are easier to acquire and we stand a better chance to QSO among our own Ontario friends. The use of low power and good key click filter are desirable if you wish to stay on good terms with the nearby BCLs. 3850 to 4000 KC is now open for phones, subject to the usual "equipment conditions," as well as 3500 to 3550 KC. The additional 50 KC adjacent to the W phone band should aid us in working the Ws, while we still retain the other 50 KC. Portable work may now be done on 10, 5 and 1½ meters "in a passenger auto owned by the licensee, or at a temporary location, for communication with any licensed amateur station (including the equipment installed at the home address of the portable station) providing the word 'Portable' be used after your call, and that the equipment be available at the home address for inspection." This should encourage more experimenting on the higher frequencies and result in more outdoor activity this summer. Let's make use of our privileges.—Ed.

The Ve ham's new game . . . "XTAL-gazing."

AN A/C OPERATED HIGH GAIN, HIGH FIDELITY AMPLIFIER, FOR CRYSTAL OR CONDENSER MICROPHONE

By VE3XJ

The construction of a high gain, high fidelity amplifier was undertaken some time ago, in order to properly accommodate either a crystal or condenser microphone, and after some experimental work, the amplifier described in the following text was evolved. For the sake of fidelity and the avoidance of a–c hum, the amplifier was resistance coupled throughout. When transformers are used, very great difficulty is experienced in reducing the hum pick-up to a sufficiently low level. Another very important point in the construction of a high fidelity amplifier is that the very last trace of regeneration must be removed. Contrary to the opinion of some, a resistance coupled amplifier is quite susceptible to oscillation unless proper precautions are taken, which, happily, are not difficult of fulfilment. The frequency range is wide and the amplifier has a flat gain characteristic; the gain and output are such that it is possible to fully excite any tube requiring 40 to 50 volts peak grid swing, when using a condenser microphone, which has a lower output level than the diaphragm type of crystal microphone used, generally, by amateurs.



CRYSTAL OR CONDENSER MICROPHONE AMPLIFIER.
(SEE TEXT FOR CRYSTAL MICROPHONE CONNECTIONS)

The amplifier is built in two sections, a "head amplifier" using a single 56 tube and the main amplifier using a 57 coupled to a 56 output tube, which is coupled by means of a shielded cable to the next amplifier tube. The diagram shows the connections used with a condenser microphone, but in order to use a crystal microphone, it is merely necessary to remove R4, leaving that portion of the circuit open. The crystal microphone is then connected to the points indicated as (1) and (2). The input circuit of the amplifier is somewhat different to those generally shown for crystal microphone use, but in view of the fact that the microphone would be seriously impaired if d–c were applied to it, it was felt that the use of the isolating condenser C1 was justified, in case there should ever be a short in the system, such as between the tube elements. C1 costs only a very small fraction of the amount spent for a microphone. R1 should not be reduced in value, otherwise "lows" would be lost.

By eliminating the head amplifier and connecting a suitable input transformer from C7 to ground, a double button carbon microphone or phonograph pickup may be used. Together with a suitable power amplifier, the combination will make an excellent public address system, when not doing duty in the modulation system in the transmitter.

There is one thing that should be done thoroughly in the construction of this amplifier, and that is SHIELDING! Now, don't get frightened, for that is not particularly difficult. In view of the fact that no transformers have been used in the head amplifier, there is practically no electromagnetic shielding to be done, but only electrostatic, which calls for fairly simple shielding. At VE3XJ, the head amplifier was placed in a tin shield 3" x 3" x 5¼", which was just adequate for the parts going into it. This particular shield had formerly contained one half pound of tea, purchased from a chain store. The lacquer was dissolved off, and the case given a coat of crackle lacquer, resulting in quite a commercial appearance, far removed from the lowly role of tea container! The main amplifier was built into an eight inch flour can. The cable between the head amplifier and the main amplifier was shielded, and the shield connected to the shield cases at each end. The output of the main amplifier was likewise run in a shield, to the gain control on the speech amplifier, the gain control being a 250,000 ohm variable potentiometer, shielded in a three inch coil can. There was absolutely no sign of instability unless the microphone was placed near the main amplifier or speech amplifier, which certainly was not an operating condition. Screened openings should be provided for ventilation. Either spray shielded tubes or ones equipped with the specially shaped, close fitting tin shields should be used, in order to secure the necessary stability. The parts should be mounted on small metal or bakelite panels inside the shields, and if possible floated on rubber cushions, to avoid microphonics. All by-pass leads should be as short and direct as possible. Lay out the parts like the circuit diagram, straight through, without "doubling back". In the diagram, it will be noted that a center tapped resistance is connected across the heaters, and the tap grounded. This resistance unit must be right in the head amplifier. Keep all heater leads close to the metal shields and away from other connections, particularly grid leads. If possible, steel shielded heater wiring should be employed.

No description is given here of the power pack, except that it should consist of a power transformer to supply filament voltage for the 280 rectifier, plate supply high tension, as well as the heater supply for the two 56 and one 57 tubes. (Of course, the 6.3 volt series tubes could be used, such as the 76 and 6C6 or 77, the remote cut off tubes being unsuitable.)

The d.c. output should be 200 to 250 volts at 30 milliamperes, the filter should consist of two chokes and three condenser sections of eight microfarads each, either wet or dry electrolytic. The chokes should have an inductance of 30 to 50 henries at the operating current. The power pack should be a separate unit at least three or four feet away from either amplifier. There should be two cables, supplying the head and main amplifiers. These cables should not be combined with any other supply cables of any kind.

This amplifier has been thoroughly tested, and it can be said that it will produce practically everything the microphone delivers to its terminals, and its inherent distortion is negligible.

THE VE QSO CONTEST MARCH 9th to 19th

The VE contest sponsored by the Canadian Tire Corp'n Ltd. in March "went over with a bang" in the opinion of all who entered or took part. More VEs were heard during the contest period that any of the old-timers ever heard. VE5HQ, winner of the VE/W contest last Fall, again took undisputed possession of first place among the CW gang by working 160 different VEs, including three VE1s, for a total of 5400 points. Input to his final stage never exceeded 47 watts, and all bands were used. In all he heard 250 different VEs and had QSOs with 50 different VE cities or towns. VE3NO and VE3ABW each worked 120 VEs. VE3TD, VE4GE, VE4IG, and VE5FG all worked over 100 VEs. VE1FL worked VE5AC on 3.5 mc, which is the longest recorded Trans-Canada 3.5 mc QSO. VE4IG figured he worked 103,810 miles in his QSOs. The leading phone station was VE3FP, who worked the amazing total of 93 VEs for 1250 points. Our YL op. VE3YL, took second place with 1020 points, while using only 45 watts input. VE3FP worked 7 VE1s, 6 VE4s, and one VE5, all on 160 meters. VE2CA working 14 mc only had 20 QSOs, and begs that the CW men look for 14 mc VE phones in the next contest of this nature, as he heard scores who were not listening for phone. The usual amount of equipment was blown up, antennas came down, monitors wouldn't work, and so on. VE2IY worked 46 VEs for 1185 points with only 12 watts input, while VE3PO "snuk" into the prize group with only 10 watts. About 90% used less than 50 watts input, which shows well how lower power will get out. Every one shall be looking for another contest next year. The scores follow:

CW Scores

VE5HQ	5400	VE4LK	1080
VE1HG	3060	VE3OR	1065
VE4GE	2856	VE3PC	1057
VE1BH	2205	VE4KU	1000
VE3IB	1740	VE2DR	970
VE3CD	1710	VE2FG	945
VE1FN	1600	VE3TF	938
VE3NO	1552	VE4AC	930
VE5FG	1470	VE3BC	870
VE5HR	1455	VE3NB	855
VE4SH	1433	VE4IU	810
VE3LV	1410	VE4KA	810
VE3ABW	1403	VE3SZ	805
VE3ER	1360	VE2IJ	795
VE1GL	1275	VE3NI	795
VE3HF	1260	VE3WV	787
VE1FL	1230	VE4EC	778
VE3TD	1215	VE3RN	750
VE4LB	1185	VE3AAG	735
VE2IY	1185	VE3RO	730
VE3DJ	1178	VE5JC	720
VE3GT	1170	VE3ACL	705
VE4IG	1165	VE2FE	700
VE3DU	1163	VE3YC	700
VE3QK	1125	VE4TO	690
VE3JT	1118	VE3PO	675
VE1FW	1080	VE1EV	660

(*Continued on page 7*)

TRAFFIC IN ONTARIO

Wherein An RM Rings a Fresh Variation on the Old Blue Notes of a Time Worn Jinx

With no less than twenty-five Official Relay Stations, seven of which are Route Managers, in Ontario there is no reason why that section cannot show a better traffic organization.

At the height of what looked to be the most fruitful season in years from the traffic standpoint, Frank Hartley, VE3JT in Toronto, our Chief RM, was stricken with an illness that would startle most fellows into complete oblivion from the radio game. Frank pounded on and on, first with only one eye and then against doctor's orders continued to remain at his post on Trunk Line "T" until he lost use of both, and today is confined to his home as he has been for some four months now. Although he is able to get in a little brasspounding now and again, he is unable to handle Trunk Line Schedules because he cannot see to copy. This is what we call "intestinal fortitude" and maybe a little touch of foolhardiness, but Frank is like that, and we owe to him our greatest of sympathies and wholehearted wishes for a speedy recovery. He certainly is no ham to play to the "grandstand" for the sake of a large total, but he just wouldn't let his skeds down until he lost use of both arms. And that, me hearties, is what we call ARRL SPIRIT.

The writer of this article has taken for his locale strictly the Ontario Section, and wishes to beg pardons of adjoining district ORS and RMs if he rants on and on about his own little playground. However, it is sincerely anticipated that the "birds of this feather" in other Canuck sections will take up where this will leave off, and clear us all up on the difficulties, the sound and the fury of their particular haunts.

Since the time of my Route Manager appointment in July of 1934 it has been my experience to sense a rather hopeless situation as far as getting traffic to its destination in Ontario or Canada was concerned. I have been the clearing house for a lot of traffic originating in the United States and other parts of the world by virtue of alternating with VE3TM on Trunk Line "M", and up until recently spent the greater part of my time tearing my hair and spitting fire for the want of someone to QSP for me.

It always has been a reasonable certainty to have traffic delivered in London, Toronto or Montreal, but outside of these larger cities where the Ham population is large enough to furnish by chance one interested enough in the art of doing public service a bit of good via Amateur Radio, the possibilities of prompt QSPing and delivering is somewhat like that of the proverbial snowball in the QRA beginning with "H."

During the past four weeks it has been gratifying to work with such a "stout fella" as VE3DU in London in organizing a Trunk Line from Ontario's and possibly Canada's most southern extremity, Windsor, to Toronto. I say during the past four weeks, however, 3DU and yours truly have been pondering on a solution for some nine months and it has been only recently that we have been able to show any results from our efforts. At present the connections are VE3TM (Leamington), VE3QK (Windsor), VE3DU (London), VE3UM (Galt), VE3WK (Toronto). Hamilton always has been a "dead spot" insofar as traffic is concerned, although there is activity in other branches to the Nth degree in that city, and surely one of those stations could come forth to duty on radio's "firing step" and help out. There are many sides to the traffic argument. Perchance a lad would like to be a brasspounder but he cannot give sufficient time to consistent skedding. In this case may we who have had experience remain to state that fifteen minutes per day is sufficient to retain a schedule that would do a world of justice to Ve Radio and his community. Perhaps it's power, lack of it! Nope, a lowly five or six watts will suffice to keep a year around schedule just as consistently as 5 KW if the proper time and operating methods are employed. Another angle in favor of low power for traffic work is found in the fact that for most consistent and reliable relaying, "short hop" point-to-point skeds are the ones that last longest and furnish the most interesting results. And just what real good it does to the average operator, his operating, his knowledge of radio, and his personality is beyond superlatives to describe.

There are marvelous opportunities to establish an Ontario Network where such cities and towns as Stratford, Brantford, Sarnia, Guelph, Owen Sound, Collingwood, North Bay, Capreol, Kapuskasing, Port Arthur, Fort William, and along Lake Ontario to Montreal there is Oshawa, Cobourg, Belleville, Kingston, Brockville, and numerous intermediate points between all with an amateur population large enough to furnish one Traffic Station, fifteen minutes per day, to do his part in the formation of an Ontario Net. Ottawa, of course, has an RM in Jim Jarvis of VE3RK, whom I know will agree with my angle of the situation.

In the event that such an organization should ever be realized, it would be a simple matter to route traffic to most any city, town or village in Ontario. Hitherto this has been an impossibility and a rather embarrassing situation to the ORS when he is asked by the "outsider" to "send a message to Sudbury, Twin Falls, or some Kawartha resort where the boss is fishing." The terse and true answer to this "impossibility" is merely LACK OF SUPPORT among Ve Hams. Even though our population is only an iota as compared to our W cousins, why can't we establish just as good a traffic organization? WHY CAN'T WE ESTABLISH A BETTER TRAFFIC SYSTEM?

Did you ever scramble out of bed fifteen or twenty minutes earlier in the morning and sneak a listen on the 80 meter band? What did you hear? Betcha heard a host of "W's" going at it 35 per, with their "hr fm podunk ill nr so and so." Maybe you said "nitwits" and crawled back in again and never noticed the absence of QRM at times from 7 till 8.30 a.m., or, if you eat at home at noons, from 12.25 to 12.40 p.m., a grand time and still you have time to leisurely stroll back to work and enjoy your noon "ciggie." So really after all OM, 80 meter QRM is small potatoes at those hours and a dang good time to forget those worries at the office. I know that it sure is the proper way to "start the day off", not to mention the grand slogan that one of our national advertisers gave us, "The pause that refreshes." Try it!

Wouldn't it be a great feeling to find some response to a doggerel like this, where it actually means something to Ham Radio and Canada's part in it. And even though I've hunted and punched till my fingers are stubbed clean haywire, I honestly think that one or two of "the gang" will see the honest and dyed-in-the-wool effort we are putting forth to do things for Canadian Hamdom with XTAL, a NEW DAY, and a foundation like the ARRL. —Jon VE3QK.

(Our appreciation would be beyond explanation if any ham or hams in any of the cities or towns mentioned in this article would send a letter or a postal to Jon in care of XTAL offering their suggestions or offering to help in a practical manner immediately.—Ed.)

PERSONALITIES

WHERE YOU ARE MOST LIKELY TO MEET THEM

VE3TM . . . fast at plans for a new way to eliminate key clix usually at a certain nite-spot near Lake Erie, where most of Leamington's young blades go on "dawn patrol" . . . on his arm is a grand lil gal he calls "Bobby."

VE3WK . . . around 3880 skedding VE2BU and VE3UM about 6.30 a.m.

VE3DU . . . on 3860, or 3870, or sometimes 3855, skedding VE3QK at half-past noon daily and calling VE3TM a hayseed. David rolls a mean bowl on Tuesday nites in London.

VE3WX . . . at the new home of the Frontier Radio Club in Sandwich . . . in overalls . . . and best carpenter form . . . when he isn't guiding the financial affairs of the Border Cities "Million men."

VE3GT . . . lunching daily at the Blackstone . . . usually with one of Toronto's glamorous young barristers, VE3AZ . . . or dawncing at the King Eddy (Once in a blue moon) with a swellegant YL known as "Tommie."

VE3IB . . . anytime, on any band, between midnight and 7 a.m. . . . or at the get-togethers at his shack in Weston.

FISTS WE LIKE TO HEAR

VE3VF . . . on a straight key . . . VE3JT . . . who has yet to convince us that he hasn't automatic keying hidden behind that curtain in his shack . . . VE3JI . . . when he isn't yelling into a mike . . . VE9AL . . . and his 35 "perfect" . . . and others, too, of which you will be hearing, directly and at your suggestion.

WHATTA HELP 'TWOULD BE

If VE3RO and VE3BZ . . . both ORS . . . would get a couple of skeds . . . VE3QK would get a date with "Paul", and settle all this Trunk Line M controversy . . . that VE3TM worries so much about . . . if TM, GT and QK would sort of "explain" this Bobby, Tommie and Paul business . . . the Pansies . . . and VE3JT would lay-off the outskirts of Weston . . . call it Weston . . . if there was no QRM on any band, and if at club meetings the hams who came to listen to speeches would refrain from talking among themselves.

THE VE QSO CONTEST

(*Continued from page 5*)

VE2JI	660	VE4CE	502
VE2BU	650	VE2EE	460
VE4OB	630	VE2KF	450
VE2GZ	605	VE4SF	405
VE3LI	600	VE3IJ	400
VE3UF	570	VE3WA	370
VE3JF	555	VE3ADD	360
VE4EO	520	VE3VZ	345
VE4NH	510	VE2LL	300
VE3DD	505	VE3ACM	300

Phone Scores

VE3FP	1250	VE2CA	470
VE3YL	1020	VE3NC	240
VE3JH	750	VE3JB	240
VE3PM	676	VE2CU	172
VE3NX	630	VE3AZ	120

ALONG THE BYWAYS OF HAMDOM

THE CW GANG

So many of you responded with letters and news on what is going on in this Province of ours that your editor has been in a constant daze for weeks, trying to dope out this column, because he really needs the whole of XTAL to pass out the information received. It was elegant of you, gang, to respond so nobly. YB uses a '71, 4 watts in on 40 and 80. AAG has 47-47 on 80, 2-45s on 40, and modulates the 80 meter rig with a 27 for 160. NI, with Sarnia Hydro, wants more contests, and has a xtal rack and panel job in the making. DX is at college in N.B. ABN is after ORS. UA has low powered job that really gets out and nearly lost his YL while she was working in Toronto. DU says he's sure of at least four QSOs a day now that he keeps four skeds. (Not a bad idea at that.) ACO, new in London, is getting out. CM has been heard. SC advises "there are millions of straight 50 foot spruce trees for the taking" up his way, and claims to be the most northern VE3—at Fraserdale, near Moosonee. BV is Op for Ontario Airways at Jarvis. BB thinks "it won't be long before the 'fledgling' sprouts its wings." (Hope he's right!) JZ, who works in Ottawa, has his junk at Carleton Place, and dreams of remote control. SZ uses 59, 46, 210 and receives with 58, 66. Says "Xtal" is "R9." ADN is now AE. CD advises more hams move to Mimico as only 8 of them now QRMing each other. DB worked five continents of late. "Asia! Asia! Where in hell is Asia?" SR uses 47, 46, 210. TM is believed to be interested in a nurse at Toronto Gen'l, and JT has had a nurse . . . we'll let it go! AD seems to have gotten married since we last heard him. HB is expected back on. RQ uses 45, 45, is 22, can pass for 17 or 18, single, wants skeds with Toronto, Buffalo and Montreal. ACS worked an EA on 7 mc with 45s. CI is C.C. ER was heard in England on 3.5, and logs much DX on 7MC, OA4J, EA4AO, ZS6AF, ZT1R, OA4AT, HAF3D, ZT1H, and heard KA1AM on 14 mc. ADY will soon be on at Schumacher. TO has 59, 46, 46 211D, and a 7 tube homemade super. ACM has 59, 46, 210 and receives with 58, 58, 27, 2A5, and tries to get out on 3.5 mc. ACL is on 80 and 160 CW with lone 45. QR has been bitten and RM has been nipped by "love" bugs. ACG is new in Wingham. 3GW has moved to North Bay. RO burned out another xfmr. 3GG suggests a "swap" column for XTAL. 3MB writes, "And now it's up to us to step into line and do our bit for XTAL. VE3s are naturally interested in Ontario, at least I am. Here is where we make contacts close at home, make friends whom we have every chance to meet in person, as many of us have, and renew friendships which began via our great hobby. XTAL can be a bond of union between VE3s, a melting pot for the exchange of ideas, information, pleasantries, criticisms, or what have you." AP says IG can tell us how to work hundreds of VKs and ZLs with only 50 watts input, QJ can tell how to work Germany on 3.5, and OX can tell how to make a superhet work after it is assembled. RW is the only active station in Barrie as BX, who got his ticket, and had the whole junk perking, met a YL, and plunk! RW expects to be C.C. soon. Send stamped addressed envelopes for QSL cards to 3QB. He has some for the following: AAG, AB, ABK, ACS, AD, AEQ, AW, AZ, BA, BD, BG, BK, BM, BN, BQ, BT, CD, CI, DA, DM, DO, DP, DR, DU, EA, EE, EU, EW, FE, FF, FG, FP, FV, FW, GF, GK, GP, GR, GS, GW, GZ, HB, HE, HF(55), HG, HH, HJ, HK, HO, HX, IE, IF, IH, IV, JH, JN, JG, JV, JX, KB, KL, KK, KW, KX, LB, LF, LL(43), MH, MI, NH, NL, NO, NN, OH, OI, OL, OM, OT, OW, OX, PE, PO, RE, RI, SF, SL, SI, SJ, SV, SZ, TG, TT, TX, TY, TZ, UB, UU, VC, VF, WF, WH, WM, WS, WZ, XI, XJ, XK, XO, YG, YH, YK, YN, YR, YT, YZ, ZE, and ZH. AEE wants to know if we know the lad who excuses his keying by saying his hands are cold. RK is on again. TF worked FM8BG in Algiers on 80. ADW is at Moose Creek. IO still rebuilding as he has YL at Mac Hall. IH has a Frauette, too. SM reports females and college interfered with his part in VE contest, and that at OAC Bacteriology Dep't they are singing "The Object of my Infection." ET is now working for Pickle Crow Mine at Pickle Lake. AR is figuring how two can live as cheaply as one and has been seen in furniture stores. OK is at CFJ, Red Lake, has finished building a house, and anything may happen now. GN is at Rat Rapid. GX likes his ACR 136. Since CV left CFB the gals complain that it is a lonesome town. VE4DK has done it. And is he ever a good picker? See 'Peg papers for a peek at her. If the gang will keep responding, and sending in such interesting dope, we feel we can make this column of interest, or is it? The two brothers at XP have a 210 TNT with 500 volts from DC generator driven with an old bike right off the back wheel, developing One Manpower.

About 12 MPH is right to work W5s on 80 (3500 RPM). DM is Pres. Simcoe Amateur Radio League, and QM Sec'y. DM, HD and XV all use TNTs also. SG is taking a crack at Trunk I, as JT isn't back for tfc yet and GT is too QRL. KG has 82 QSOs in March and 42 were with VEs. HH has increased power to 120 watts. KG has applied for ORS and skeds YE and WZ.

THE PHONE GANG

3JH uses 47,210, and four 210s Class B and 4 tube TRF receiver. XZ has 1 watt phone on 160 and gets out FB. Says the cows on his farm now filter their milk supply because they hear so much about radio. ZR has class B job on 1756 KC. ADR is on 80 and 160. ABD also Class B on 160. WV has two transmitters and works all bands, phone and CW. 3KJ is on 56 mc. PM finds some time for 160. IQ contemplates more power to add to Wally's worries. BI is getting good results with a 30, 33, transceiver on 56 mc. WY uses a "Wing" in his car, and has 58s at home. MX uses 45s and enjoys 56 mc with PL and WY. BD, AZ, II, XJ, and many others around Toronto are eager for tests on ultra high frequencies. 3EU has built a directive, sixty foot lattice, adjustable mast, and is going to try tests with Rochester. EU can control the antenna array from his shack by means of a motor, switches, relay and much ingenuity. NC has an excellent signal on 160, and HC is expected on this band before long. ZA has increased power somewhat. ZR popped some filter. YP is heard often and MU, and AES not often. XT has a better signal. The girls at 3YL put out a nice signal and seem to enjoy themselves. EE is also heard occasionally. Why don't more of the gang try 160 at night? BCLs? NX will be on 14 mc soon. BM QRL at work. New Ass't Vice-Presidents of Western District of CRA are VE3DF, Wm. Stauffer, Owen Sound, and VE3ZA, Edmund Daly, Seaforth. AP is very active on 85. OX uses pair of RK-20s on 14 mc. QJ is collecting junk for 14 mc phone. IG has been putting out nice signal on 75, but the DX bug is biting again. TI, on 160, has had his life threatened by BCLs, so wanders on 40 and 20 now. JS uses 59s in final on 75 and 85, but is going to rebuild for the fortieth time, and change to Class B. Some fine DX work has been done on 160. (Note VE Contest write-up.) JO was heard in New Zealand on 160. Have any of you been heard in Europe? JO, NZ, EU, KF, NC, OT, WV, KM, WU, AAK, ACK, ABD have all been having fun on this band. One suggests an interband 160-75 QSO party some week-end. XX works VE4 and VE5 regularly, and JO, NZ and EU have worked all VE. Why is it the YLs "raise" somebody better on a mike than the OMs. KM and RR are finding the new phone band nice.

XTAL'S FUTURE

Thanks, gang, for the grand response you gave to the first issue of XTAL. It made us feel more than grand. We had been working on the idea of XTAL for some months, and had seen so much of it, we were afraid it would fall kind of flat. However, you have assured us quite to the contrary, and we are going to try to give you bigger and better XTALs as time goes on. If we can keep up the spirit VE3ZA has suggested on the editorial page, and if we should live long enough, maybe we will see the issue of which he speaks. Let us hope for both, for that will mean almost three-quarters of a century more in which to yelp into mikes, or pound brass.

And judging by your letters you seem eager to support XTAL, and eager to subscribe. You have offered anywhere from 5c. a copy to $5 a year, which proves to us, all the more, that you want XTAL, and that you are willing to back us up financially. And because of this, and because we want paid subscribers . . . as do all good magazines . . . we want you, one and all, to subscribe to XTAL *now*, to aid us in making XTAL more attractive, and more what you want. Is XTAL worth one dollar a year? We are sure you think it is, and that we'll again be surprised by the large response you will show. A list of paid subscribers will certainly be our biggest talking point when approaching advertisers. They want to be certain you like XTAL, and it is up to you, and us, to show them to what extent you like it. If every licensed amateur would subscribe one dollar a year, XTAL could come to you ten times a year, without a single advertisement in it, which would give us more space for reading matter, and the things you want us to have. Some of you mentioned the attractiveness of the ads in the last issue, that you read every word of them. Would it not be nice if we could work it fifty-fifty? Fifty per cent. of the amateurs as subscribers, and the other fifty per cent. of our costs derived from advertising. Would this not make a nice

balance, and a good looking XTAL, and an effective one? We think it would.

The SCMs of the other Canadian Sections have advised us that they will co-operate in making XTAL a "National", and we hope to have their support, editorially, for the May issue, and then XTAL will be of interest to all VE.

You know, the world is at our beck and call through the medium of amateur radio. But, firstly, let's become more united among ourselves. Above all, let there be no hard feelings. There is no place for this in amateur radio. Why not let XTAL be the outlet to your thoughts? Let us discuss our difficulties, and our pleasantries, through the pages of XTAL in the future. Can we not become more powerful in the radio spectrum through unity among ourselves?

Please excuse us for not answering many of the letters received. We have been very busy, with general business seemingly picking up, and endeavouring to line up the next few issues of XTAL. Please pardon our apparent neglect if some of your letters desired replies and didn't get them. Be assured they shall, eventually.

Do not forget to mention XTAL when writing, or communicating with XTAL's advertisers. It helps us exceedingly. And don't neglect supporting our advertisers. They have helped us bring XTAL to you, and we should show what material thanks we can by reciprocation.

We had considered enclosing a subscription blank with this issue, but as it is of a certain cost, and not a necessity, if you'll just send us your name, call and address, attached to a dollar bill or postal note, or if cheque please include bank exchange, your name will go on the list of paid subscribers at once. If, for any reason, XTAL should cease to be, you may rest assured the difference between the number of XTALs received, at 10c. per copy, and your dollar, will be refunded to you. Are you with us? We feel you are, and that is why we have come forth with our request so soon, and perhaps, so bluntly.

VE3UU requested to be subscriber number one, and that he is.

—*Ed.*

HAM ADS

CRYSTALS 1" sq. your frequency $5.00 Over the air VE3FP. Horton E. Clark, member CKOC Engineering Staff, CKOC, Fruitland, Ontario.

SELL. Transformers 2000-1500 each side CT, 450 watts, 25 cycle, $12. Filament transformer 0-30 volts tapped, $2. VE3BV, 351 Keewatin Ave., Toronto.

3000-2500-2000-1500-1000-0-1000-1500-2000-2500-3000 one KW transformer sell or swap. VE3GT.

160-80 Y cut xtals within 15 KC. $1.35. Box 1, XTAL.

QSL cards. VE3QS.

ONTARIO CONTEST

Contest Period.....Saturday, April 27th, 1 P.M. to Midnight
Sunday, April 28th, 7 A.M. to 7 P.M.

Simply QSO, or hear, any VE3 in any district outside your own. Each QSO counts three points. Each VE3 heard but not worked counts one point. For an additional five points originate one message (one only) addressed to any other VE3. Multiply total number of points by number of Ontario Districts *worked*. Mail copies of logs to XTAL by May 4th, listing date, time of QSO, or station heard, QRA, District Number of stations worked, whose originated message you handled, and points. The Ontario Districts have been divided by counties as follows: No. 1, Lambton, Bothwell, Essex and Kent; No. 2, Perth, Oxford, Middlesex, Norfolk and Huron; No. 3, Brant, Haldimand, Wentworth, Lincoln, Welland and Monch; No. 4, Bruce, Grey, Wellington and Waterloo; No. 5, Cardwell, Peel, Halton and York; No. 6, Ontario, Durham, Victoria, Northumberland and Peterboro; No. 7, Hastings, Addington, Leeds South, Frontenac, Lennox and Prince Edward; No. 8, all counties east of No. 7; No. 9, Simcoe, Muskoka, Nipissing and Parry Sound; No. 10, Algoma.
Prizes will be given to the leaders.

(Contests are hard to figure out, that are fair to all. Your ideas for future contests would be appreciated. Ed.)